

The Solutionist Ethic and the Spirit of Digital Capitalism*

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Abstract

Why do tech elites believe they are the world’s greatest do-gooders and why does it matter what they say and (claim to) think? In this paper, we use the concept of the capitalist spirit to shed light on the ways in which normative beliefs inform and justify the business models of tech companies. We first reconstruct, systematize and operationalize the concept of spirit of capitalism. We then argue that solutionist ideas have become central to the (self-)image of today’s tech companies. Solutionism refers to the idea that the use of technologies is the royal road to fixing social problems, and that one can therefore get rich while making the world a better place. We use a classification algorithm trained on hand-coded documents to empirically trace the relative importance of solutionist vis-à-vis other normative beliefs in three novel text corpora. We find that solutionist ideas are indeed central to the worldview of tech elites, and that they are also gaining ground in the broader tech milieu, although not yet in capitalist discourse at large. Finally, we theorize and illustrate the motivating, legitimizing, and orienting role of the capitalist spirit. In doing so, we contribute - conceptually, theoretically, and empirically - to the budding debates on the moral embeddedness of economic action and on the nature and trajectory of digital capitalism.

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1 Introduction

The technology industry has been on a reputational roller coaster in recent years. After a long period of almost unadulterated techno-optimism, digital capitalism found itself in a legitimation crisis. The tech giants, long heralded as agents of capitalist rejuvenation and societal progress, were now seen as the BAADD guys: “*big, anti-competitive, addictive and destructive to democracy*” (The Economist 2018). Academics and policymakers alike were calling for more regulation, while calling the tech giants out on their harmful, extractive, and monopolistic business practices. Pushback also came from within. Tech companies have experienced a wave of worker protests over ethically controversial projects (Shane and Wakabayashi 2018). And even Mark Zuckerberg himself is said to have questioned his “personal techno-optimism” when he realized “that people could abuse the thing that he built” (Thompson and Vogelstein 2018).

This ‘techlash’ – and the intellectual, social, and political movements it bolstered – have by no means disappeared. Recently, however, they have partly run out of steam as the COVID-19 pandemic exposed societies’ dependence on the services provided by tech companies, boosted their market valuation to unprecedented heights, and allowed them to increasingly cast themselves as co-providers of public welfare. Apple and Google, for example, have teamed up ‘to harness the power of technology’ to help countries combat the pandemic more effectively. And Facebook wants to help use humanity’s ‘new superpower’ to fight the pandemic: ‘the ability to gather and share data for good’. This teaches us two things. First, the idea that digital technologies are essential to solving humanity’s biggest problem is alive and well. And second, tech companies are increasingly willing to collaborate with governments in the provision of public welfare while governments increasingly rely on the infrastructure and information controlled by these companies (Magalhaes and Couldry 2020; Morozov 2020).

This is the backdrop against which this paper takes a closer look at the ideas and values animating digital capitalists – and their role in justifying and orienting their business models, including their more recent move into the provision of public welfare. Where did these ideas

and values come from in the first place? Does their (self-)image as the ‘good capitalists’ and society’s best shot at tackling its biggest problems make a difference in how tech companies are treated by the public, policymakers, and their employees? Do the beliefs that come along with it affect their business decisions or does it merely cover for their profit-making? How widespread are these beliefs? And lastly, what is their significance for understanding the past, present, and future of digital capitalism?

In this paper, we provide answers to these questions. Using both quantitative and qualitative methods, we identify a set of influential beliefs that inform the way in which tech elites see themselves – and in which they are seen by others. At the heart of these beliefs is the idea that all good things go together: that one can make money while making the world a better place. This strange “mix of commerce and cause” (Slee 2016, 9) is based on the assumption that the use of digital technologies – by inventive and cunning entrepreneurs – is the royal road to fixing social problems. Following Evgeny Morozov (2013), we call this idea ‘solutionist’, as it implies that there is a techno-entrepreneurial solution to every social problem. Much like the early protestants believed that economic success is a sign of chosenness, the solutionist entrepreneurs are convinced that if they are doing good, they will also do well; and conversely, that if they are doing well, they must also be doing good.

While this solutionist ethic was forged in the cultural crucible of Silicon Valley, it has assumed a broader significance. Not just because Californian companies play an essential role in the ongoing digital transformation of contemporary societies and economies. But also “because the avatars of [digital] capitalism have persuaded so many people that their way is the way of the future” (Sennett 2006, 12). This notwithstanding, the solutionist ethic left its strongest mark to the spirit of digital capitalism, which we define as those normative beliefs that legitimate, motivate, and orient the actions of today’s tech elites (founders, venture capitalists, senior managers, etc.).

To be sure, when the solutionist beliefs of tech elites collided with their ability to make profits, many – although not all – put profits over principles. The story of tech elites is thus

no exception to the long list of ‘cautionary tales’ about the difficulties ‘enlightened capitalists’ face in a world of ruthless and relentless competition (O’Toole 2019). But this does not mean that solutionist beliefs are inconsequential. Even if capitalists put profit over principles, solutionist beliefs can still justify digital business models both internally (towards employees) and externally (towards policymakers and the public); and they can tip the balance in favor of one course of action when there is no single obvious profit-maximizing strategy.

Nor are solutionist beliefs disingenuous: many tech elites really believe that they really are making the world a better place. It is easy to satirize these beliefs as (self-)deceptions, as HBO’s *Silicon Valley* has done so brilliantly. But as countless interviews, inside-stories, and anecdotes illustrate, many in tech really do believe in the liberating potential of technology. Ironically, Google’s Astro Teller left a meeting with *Silicon Valley*’s producers in a huff, angrily telling them that “We don’t do stupid things here [at GoogleX]. We do things that actually are going to change the world, whether you choose to make fun of that or not” (Marantz 2016). This is not the reaction of an insincere person. Solutionism might be bullshit, but most of its proponents are not, in Harry G. Frankfurt’s sense, bullshitting.

This paper makes several contributions. Conceptually, we reconstruct the concept of the capitalist spirit, and further develop and operationalize it. Theoretically, we contribute to the budding debate on the moral and ideational embeddedness of economic action (Abend 2014; Beckert 2016, 2019; Diaz-Bone and Salais 2011; Fourcade and Healy 2007; Granovetter 2017; Kazmi, Leca, and Naccache 2016). We also complement recent survey-based work on the values and political behavior of technology entrepreneurs with a more text-based approach (Broockman, Ferenstein, and Malhotra 2019). Empirically, we measure the spirit of (digital) capitalism and trace its evolution over time and across sectors. Specifically, we use a supervised classification method (Hopkins and King 2010; Jerzak, King, and Strezhnev, n.d.) on several large and novel text corpora to identify different normative ideas. In addition, we use secondary sources such as inside stories or biographies, interviews, and other academic

work to demonstrate how these beliefs became, in Max Weber’s words, ‘effective forces in history’, that is, how they came to justify and orient the actions of digital capitalists.

The paper proceeds as follows. We first give an overview of the intellectual history of the spirit of capitalism and elaborate on the definition given above (2). After describing the solutionist ethic at the heart of the spirit of digital capitalism (3), we introduce our data sources and explicate and validate our methodological approach (4). We then present our findings and discuss them in light of more qualitative evidence and theoretical reasoning on the legitimizing, motivating, and orienting role of the capitalist spirit. In doing so, we also distinguish our ‘newest spirit’ from what Boltanski and Chiapello (2007) have called the new spirit of capitalism (5). We conclude by discussing the broader theoretical and political relevance of our argument (6).

2 The Spirit of Capitalism – Revisited

The concept of the capitalist spirit undoubtedly belongs to the most colorful and controversial concepts in the history of sociological thought. It was first introduced by Werner Sombart (1902) in *Der moderne Kapitalismus*. For Sombart, every economic epoch was defined as much by its predominant economic attitudes – its spirit – as by its institutional form (Sombart 1902). Arguing that the capitalist spirit was defined by a combination of acquisitiveness and economic rationalism, Sombart laid the conceptual groundwork for an inquiry into the ideational elements underlying capitalist action (Sombart 1902, 391).

Max Weber built on this groundwork when he borrowed Sombart’s concept in his famous study *The Protestant Ethic and the Spirit of Capitalism* (Weber 2007). What Weber had in mind, however, was less a cognitive attitude than a “peculiar ethic” (Weber 2007, 17). Weber’s capitalist spirit is not “mere business astuteness”, but an “ethos” the violation of which “is treated not as foolishness but as forgetfulness of duty” (Weber 2007, 17).¹ Weber’s account,

however, remains genealogical. The spirit of capitalism fades away after it has performed its midwifely function. Today’ capitalism no longer needs to motivate its subjects ethically, but “educates and selects [them] through a process of economic survival of the fittest” (Weber 2007, 20). Resting on “mechanical foundations” (Weber 2007, 124), capitalism no longer needs the helping hand of its spirit.

Almost a century later, the concept of the capitalist spirit was picked up by Luc Boltanski and Ève Chiapello in their book *The New Spirit of Capitalism* (Boltanski and Chiapello 2007; Du Gay and Morgan 2013). Building on Weber’s idea that “people need powerful moral reasons for rallying to capitalism”, they define the spirit of capitalism as an “ideology that justifies engagement in capitalism” (Boltanski and Chiapello 2007, 8–9). While a “minimal argument in terms of compulsory submission to economic laws” might be “a motive for staying in a job” it isn’t one “for getting involved in it” (Boltanski and Chiapello 2007, 8). To really mobilize people – and to defend itself against its critics – capitalism needs “to draw upon resources external to it, beliefs which, at a given moment in time, possess considerable powers of persuasion” (Boltanski and Chiapello 2007, 20).

Here, Boltanski and Chiapello build on the economics of convention (Diaz-Bone and Salais 2011) and its argument that “modern economies comprise multiple principles of evaluation” (Stark 2009, 11). Such principles – or orders of worth, or polities (*cités*)– are like moral grammars that define “the good, the just, and the fair—but according to different criteria of judgment” (Stark 2009, 12). Table 1 systematizes the somewhat scattered references to the eight polities identified by the literature (Boltanski and Thévenot 1999, 2006; Boltanski and Chiapello 2007; Thévenot, Moody, and Lafaye 2000). While all polities provide “justifications in terms of the common good” (Du Gay and Morgan 2013, 13), they provide actors with different criteria for doing so. Each polity features a concept of what is valuable or worthy

¹Weber consistently uses the concept of the capitalist spirit in quotation marks and limits his use of this “somewhat pretentious phrase” (Weber 2007, 13) to value-rational aspects of economic action (Weber 2001, 50).

(e.g. efficiency in the industrial polity, recognition by others in the opinion polity) a criterion of evaluation (e.g. technical performance or productivity, fame or followers); a mode of investment or sacrifice (e.g. disenchantment, the forgoing of privacy); a distinct ideal type (e.g. the manager, the celebrity); a type of insanity or pathology (e.g. squander, anonymity); an evaluation test (e.g. a formal test procedure, publicity); and a specific underlying anthropology and cosmology (e.g. the idea that the world can be mastered through calculation and planning, the idea of humans as craving for recognition).

Boltanski and Chiapello's now argue that at different stages of capitalist development, the spirit of capitalism draws on and combines different orders of worth, tapping into the moral resources they provide (Boltanski and Chiapello 2007, 16–19). The first version of the spirit of capitalism – corresponding to the high capitalism of the 19th and early 20th century – is dominated by bourgeois values of thrift, responsibility, and faith in progress, embodied by the market, the domestic and the industrial polity respectively. During the heyday of the managerial capitalism of the 20th century, the industrial polity – with its emphasis on rational organization and bureaucratic planning – massively grows at the expense of the domestic polity, which had glorified the company patriarch and not the manager. Finally, with the rise of the knowledge economy in the 1970s, the capitalist spirit increasingly draws on the newly formed project polity and its values of agility, flexibility, and collaboration.

Our own definition of the capitalist spirit is based on this conceptual history. We follow Weber's argument against Sombart and restrict the concept of the capitalist spirit to normative beliefs. And we follow Boltanski and Chiapello's argument against Weber and maintain the continuing importance and changing nature of these beliefs over time. What Sombart and Weber have only implied, and even Boltanski and Chiapello have not systematically articulated, however, are the legitimizing, motivating, and orienting roles of the capitalist spirit.² Spelling them out allows us to systematize the concept of the capitalist spirit and

²Boltanski and Chiapello (2007), p. 16 as well as much of the subsequent literature (e.g. Kazmi, Leca, and Naccache 2016) have focused on the ability of the capitalist spirit to i) generate excitement

connect it to more recent debates on the moral and ideational embeddedness of capitalist action.

2.1 Legitimation

For Sombart, the capitalist spirit was crucial in lending “general acceptance” (Sombart 1902, 379) to acquisitive and rationalistic attitudes that, while essential for capitalism, were long frowned-upon if not stigmatized. Similarly, Weber believed that it was precisely to assert itself in a “world of hostile forces” (Weber 2007, 20–21), that capitalism had to tap into the legitimatory power of religious beliefs. Weber also knew that entrepreneurs were rarely received “peacefully”; instead, a “flood of mistrust, sometimes of hatred, above all of moral indignation, regularly opposed itself to the first innovator” (Weber 2007, 31). Weber thus uses the concept of the capitalist spirit in the context of a theory of justifiable actions, in which normative ideas – religious or otherwise –subjectively motivate but also intersubjectively legitimate economic actions (Campbell 2018, 12).

The idea that capitalism is always subject to criticism is also central to Boltanski and Chiapello’s work. Social critics decry capitalism for producing poverty, inequality, exploitation and egoism; artistic critics denounce capitalism as the source of alienation, oppression, disenchantment, and loss of authenticity (Boltanski and Chiapello 2007, 38). The spirit of capitalism allows capitalism to selectively appropriate – and thereby diffuse – these criticisms.

or enthusiasm among those working for and within capitalism, to ii) credibly provide them with a sense of economic security, and to iii) demonstrate how capitalism contributes to the common good and how inequalities can be justified in terms of differential contributions to the common good. This conceptual trias of excitement-security-fairness lies somewhat orthogonally to our conceptual trias of legitimation-motivation-orientation. One could subsume fairness under legitimation and excitement and security under motivation, but not only does this not cover the orientational dimension; it also makes unnecessarily strong assumption about the content of, say, the motivational dimensions. For example, one could think of normative beliefs instilling a sense of professional duty that does not easily fit with either the notion of excitement or the notion of security. Our conceptual trias is thus not only more encompassing, it is also more versatile. Moreover, we systematically reconstruct our three dimensions from the works of Sombart, Weber, and Boltanski and Chiapello, showing that they have been central to the debates on the capitalist spirit all along.

The new spirit of capitalism, for example, incorporated the artistic critique of managerial capitalism as overly hierarchical and bureaucratic by singing the praise of flat hierarchies, de-centralization, flexibility, and self-reliance. These elements were, of course, highly congenial to the demands of a postindustrial economy. The appropriation of the artistic critique therefore eased the transformation of capitalism to a more flexible but less secure form, while simultaneously stealing its critics’ thunder.

More recently, business scholars have emphasized the importance of actively curating a company’s public image as essential to successfully managing the ‘non-market environment’ (Bach and Blake 2016). We argue that the spirit of capitalism amplifies the effectiveness of such legitimacy-seeking strategies by shaping the ‘moral background’ (Abend 2014) of the public and political debates on capitalism. The moral background “provides the theories and tools that people and organizations employ to ascertain goodness in the realm of morality” (Abend 2014, 30). By drawing on the theories and tools embodied in the current manifestation of the capitalist spirit, capitalists can ‘juice up’ the persuasiveness of their legitimacy-seeking activities and thereby ensure favorable regulatory and reputational outcomes (Bach and Blake 2016; Dror 2015).

2.2 Motivation

Both Sombart and Weber are clear about the central role of the capitalist spirit in creating and sustaining the “dominant motives” (Sombart 1902, XXI) and “psychological sanctions” (Weber 2007, 145) underlying capitalist action. And Boltanski and Chiapello emphasize capitalism’s reliance on an enthusiastic workforce, especially for positions of leadership. By incorporating morally appealing ideas, capitalism can “maintain its powers of attraction”, i.e. its ability to attract and motivate (elite) workers (Boltanski and Chiapello 2007, 20).

What the theorists of the capitalist spirit have put their fingers on is capitalism’s perennial ‘motivation problem’ (Olma 2016) or “deficit of motivation” (Kazmi, Leca, and Naccache 2016, 744). How can capitalists motivate workers to not only join their companies, but to give their

blood, sweat and tears for them. Companies can, of course, use the stick of organizational sanctions and the carrot of economic rewards. But there are limits to such coercive and economic methods of ensuring compliance (Etzioni 1975; cf. Habermas 1988, 75). As Bewley writes:

“Workers have so many opportunities to take advantage of employers that it is not wise to depend on coercion and financial incentives alone as motivators. Employers want workers to operate autonomously, show initiative, use their imagination, and take on extra tasks not required by management; workers who are scared or dejected do not do these things” (Bewley 1999, 431).

Companies, especially those at the technological frontier, are thus incentivized to employ methods of normative compliance; methods that are meant – and were shown – to instill identification with the company based on shared values and symbolic rewards (Etzioni 1975; Judge and Kammeyer-Mueller 2012, 349). Since the capitalist spirit periodically incorporates widely held normative ideas (often by co-opting them from capitalism’s critics), drawing on these ideas can help companies convince their employees that their values are aligned and thereby ensure their commitment.

2.3 Orientation

Max Weber famously wrote that idea can, like “switchmen” (Weber 1946, 280) change the tracks on which (capitalist) actors pursue their economic interests. Capitalists want to maximize profits, but they rarely know how to go about it, especially when they operate radically innovative sectors. Acting under the shadow of economic uncertainty, they cannot know in advance which investment decision will pay off and which innovations will take off. It is therefore often beliefs – such as heuristics from the past or fictional expectations about the future – that guide the hand of even the most rational business men (Beckert 2016; Granovetter 2017). The moral ideas embodied in the capitalist spirit can thus provide capitalists with plausible and appealing strategies and goals in the face of uncertainty (Schröder 2013).

Table 1: Overview of Politics

Order of Justification	Market	Industry	Inspiration	Domestic	Opinion	Civic	Project	Green	Solutionist
Central Value	Free Competition	(Technical) Efficiency	Originality	Traditional/Local Authority	Recognition	Public Good	Activity (Agility)	Sustainability	Solving key social problems
Evaluation Criteria	Value, Price	Technical performance, productivity, planning	Creativity, Non-conformity, Authenticity, Epiphany	Local esteem, personal recognition	Renown, fame	Rule governed, representation, solidarity	Successful self-management, of number projects and contacts	Sufficiency, environmental friendliness	Upgrading and Enabling Humans/Humanity
Mode of investment (sacrifice)	Opportunism	Disenchantment	Not fitting in	Responsibility for and attachment to inferiors/the local	Forgoing privacy	Forgoing one's own interests	Forgoing of stability	Avoiding Externalities	Risk-Taking (Failure)
Ideal Type	Businessman, merchant	Engineer, professional expert	Creative Genius, Misfit	(Company) Patriarch	Celebrity	Public Servant, virtuous politician	Entrepreneurial self	Environmentalist	Philanthro-Entrepreneur
Insanity	Regulation	Spontaneity, Squander	Conformity	Presumption	Anonymity	Corruption	Immobility, inactivity	Unconditional Growth	Lone inventor, mission-less capitalist, Luddite
Test	Competitiveness	Procedure test	Original thoughts, invention, creations	Trustworthiness	Publicity	Equal rights and duties (contract social)	Finding new projects	Healthy Environment	Disruption
Anthropology/Cosmology	Humans follow their enlightened self-interest, markets create win-win situations (invisible hand)	Nature and Society can be mastered through calculation and planning	Aesthetic of the Genius and Conformity of the masses	Natural harmony as a result of natural hierarchy	Humans as craving recognition	Humans as political equals	Humans as entrepreneurial selves in a connected world	Humans need a harmonious, stable relationship with both their environment	Humans have flaws but also potential, technology creates win-win situations

3 The Ethic of Solutionism

As its predecessors, the spirit of digital capitalism draws on several orders of worth at the same time. Its core element, however, is the strong appeal to what we call the polity of solutionism. Evgeny Morozov defines solutionism as an ideology that recasts “all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimized – if only the right algorithms are in place” (Morozov 2013, 5). Building on this definition, and on a qualitative analysis of documents by and about digital elites, we conceive the solutionist polity as an order of worth in which value or worthiness derives from solving social problems with technological means (see also Table 1).³

This implies a view of the world in which all relevant social problems can, in principle, be solved technologically; in which there is a technological hammer for every social nail.⁴ Social problems are not the result of asymmetries in power or wealth that call for a political solution. Rather, they are the result of inefficiencies and deficiencies that can be eliminated with the right technology (Slee 2016). This gives solution its characteristic techno-libertarian bend (cf. Barbrook and Cameron 1996). The solution to people’s financial difficulties, for example, is not a higher minimum wages or stronger unions, but smart algorithms – offered by companies like Even – that help people manage their budgets more efficiently.

While digital technologies have massively amplified the reach and appeal of solutionist ideas (Morozov 2013, 15–16), solutionism is not a product of the digital era but has deeper roots: in the culture of engineering and its belief that there is a ‘technological fix’ to all

³Others have used different concepts to describe similar ideas. For example, Meredith Broussard (2018), p. 14 coins the term “technochauvinism” to describe the “belief that tech is always the solution”; and James Bridle (2018), p. 4 uses the term “computational thinking” to describe the belief “that any given problem can be solved by the application of computation”.

⁴Bill Gates uses the same metaphor: “Any problem I will look at how technical innovation can help solve that problem. It’s the one thing I know and the one thing I’m good at. That’s my hammer. And a lot of problems look like nails, because I’ve got a hammer” (Schlosser 2019).

societal problems (Johnston 2017) as well as in the “New Communalist ethos of tool use” (Turner 2006: 238) and their faith “that experimentation and the proper deployment of the right technologies could save the world” (Turner 2006: 244). These techno-optimist tendencies are amplified by the culture of coding, which nurtures an “almost aesthetic (...) dislike for inefficiency” (Thompson 2019, 21); and a hubristic control illusion that understands social problems in the same way as coding problems by extrapolating from the programmer’s intuition that one “can program any procedure [one] thoroughly understand[s]” (Weizenbaum 1976, 103–4). Such “computational thinking” (Bridle 2018, 4) is perfectly epitomized by Mark Zuckerberg’s belief that the ‘first principle’ of engineering is to ‘think of every problem as a system and every system can be better. No matter how good or bad it is, you can make every system better’.

But despite the importance of technology, the solutionist is more than just an engineer or coder. She is, in Schumpeter’s sense, not an inventor but an innovator – someone who commercializes an invention. An invention that cannot be commercialized is a bad invention. Larry Page realized this when he was still a boy. Reading a biography of Nicola Tesla, who was a brilliant inventor but a terrible innovator, he concluded:

“You don’t want to be Tesla. He was one of the greatest inventors, but it’s a sad, sad story. He couldn’t commercialize anything, he could barely fund his own research. You’d want to be more like Edison. If you invent something, that doesn’t necessarily help anybody. You’ve got to actually get it into the world; you’ve got to produce, make money doing it so you can fund it” (Serwer 2008).

Therefore, to really make a difference, the solutionist needs to be an entrepreneur as much as a technologist. But the solutionist is not just an entrepreneur; she is a philanthro-entrepreneur. In the solutionist worldview, making money and making the world a better place are not contradictory but can and should go hand in hand. Silicon Valley, as Tom Slee put it, “may have its share of the world’s richest people, but it has always seen itself and presented itself as being about more than money: it’s also about building a better future”

(Slee 2016, 9). The solutionist not only abhors the lone inventor, who has her way with technology but has no business model. She also rejects the those who, like those on Wall Street lack a purpose and are only in for the money.

But purpose alone – without technology and a viable business model – is equally flawed. Hence the rejection of traditional politics as the best way to address social ills – a rejection that echoes the New Communalists turn “toward social and economic spheres as sites [of] social change (Turner 2006, 244). Solutionism shares this sentiment with philanthrocapitalism – the idea and practice of applying a business logic to philanthropy in order to make it more efficient, impacted-oriented and financially profitable (McGoey 2012). Many tech elites in fact use their technological and business acumen to make charity bigger, bolder and more data-driven (Stanley 2015). But while both solutionists and philanthrocapitalists portray public and private interests as mutually compatible, they do so from opposite sides.

Philanthrocapitalism is about the “idea that charity is good business” and can therefore be profitable (McGoey 2012, 187). Solutionism, on the other hand, is about the idea that business itself can be philanthropic. In the solutionist worldview, there is a natural alignment between business opportunities and social problems. We live, as Silicon Valley guru Peter Diamandis, puts it, in “a world where the biggest problems on the planet are the biggest market opportunities“ (Rowan 2013). Philanthropy is thus neither a separate stage of life nor a more or less profitable side business. Whereas traditional philanthropist in the wake of Carnegie had espoused the idea that “after-the-fact benevolence justifies anything-goes capitalism; that callousness and injustice in the cutthroat [marketplace] are excused by later philanthropy” (Giridharadas 2018, 164), the solutionist has a different take. Doing good is not an atonement for doing well, but simply the other side of the same coin. „It’s been a yin and yang equation”, as Tom Werner puts it: “We’re changing the world on one side and building a great company on the other side“ (Hull 2014).

While capitalists have always justified their profit-seeking activities with reference to some abstract notion of the common good, usually some version of Smith’s invisible hand,

solutionists believe that businesses can contribute to the common good much more directly. In this “new, postmodernized version of Adam Smith’s invisible hand” (Žižek 2006), companies with the grandest purpose will miraculously also be the companies with the biggest profit. Underlying this idea – that all good things go together – is an “almost religious faith” (Giridharadas 2018, 41) in the harmony of human interests and the ability of technologies to create win-win situations.

“What’s amazing about tech (...) is that there are so many opportunities to have your cake and eat it, too (...) There’s a stereotype that you have to choose in life between doing good and making money. I think for a lot of people that’s a real choice (...) But for technology, there are a significant number of opportunities – Google search being the most massive example of all time – where we simultaneously are doing something lucrative and really good for the world. [A] lot of times you can get in situations where they’re all aligned, where the bigger the reach of the good you’re doing, the more money you’ll make” (Justin Rosenstein in Giridharadas 2018, 41).

This notion is based on a worldview that understands individuals and societies as simultaneously flawed and full of potential. There is a tension between what is possible – given the laws of physics – and what is realized. Erasing this tension is the source of the solutionist impetus. This idea finds its expression in the techno-utopist “rhetoric of potentiality” (Dickel and Schrape 2017, 47). The world is full of bugs but can be fixed with the right technology. It is the calling of every solutionist to do just that: upgrade humanity by becoming a social engineer in the true sense of the word. For now, the focus is on giving humans access to information and to connect them with each other; for through “the power of technology, age-old obstacles to human interaction, like geography, language and limited information, are falling and a new wave of human creativity and potential is rising” (Schmidt and Cohen 2013, 4). But the end-game is much grander: solving humanity’s oldest problems – old age, sickness, death – by upgrading humans themselves.

Animated by the normative power of the possible, solutionists have little respect for the status quo – and the institutions that maintain it. Hence the veneration for pioneers and disruptors. If the status quo is flawed, and the new is full of potential, the pioneers and disruptors are but the harbingers of a better future. Breaking the law thus becomes civil disobedience in the name of a better world. “You can’t change the world without a certain amount of healthy willingness to break the rules” (Sebastian Thrun in CBS News 2014). And if change is a good thing, more change is even better. “If you change the lives of one hundred million people, you are not successful. You are only successful if you change the lives of 1 billion people” (Sebastian Thrun in Schulz 2014). The lot of the disruptor is of course a risky one and requires audacity and the willingness to fail, since “failure and invention are inseparable twins” (Bezos 2015). But for those hungry and foolish enough, the rewards will be big – not in the hereafter, as for the protestants, but in the here and now. Daring to dare thus becomes something of an ethical commandment.

4 Data & Methodological Approach

To test our arguments, we collected three novel text corpora and devised a coding scheme for hand-coding documents into the different polities. We then used these hand-labeled documents to estimate the proportion of documents in each category in the larger corpora.⁵

4.1 Data

Each corpus serves a distinct analytical purpose. The first corpus consists of public statements of digital elites in which they talk about themselves or their worldview (e.g. interviews, speeches). Digital elites are here narrowly defined as members of the 2015 Forbes 400 who played crucial roles (e.g. founder, CEO, major investor) in tech companies founded after

⁵For a similar approach with respect to elites distinction, see Friedman and Reeves (2020).

1996, and therefore made most of their money in the last 20 years or so (it thus excludes ‘first-generation’ digital elites like Bill Gates and Steve Jobs). The purpose of this sampling procedure – which resulted in 2326 paragraphs – was to identify the spirit of digital capitalism where we would most expect it: in the professed beliefs of the most recent generation of digital elites – individuals like Larry Page, Mark Zuckerberg or Elon Musk.⁶

The second corpus consists of articles published in *Wired* between the magazine’s founding in 1994 and 2018, which we scraped from the web and split into paragraphs. After removing very short paragraphs, we ended up with a total of ~1.5 Million paragraphs. *Wired* is widely known as the house organ of the tech community. It is thus the perfect medium to understand the intellectual proclivities, fads, and currents of the wider tech milieu.

The third corpus consists of articles published in the *Harvard Business Review* (HBR) between the journal’s founding in 1980 and 2018, which we also scraped from the web and split into paragraphs. Again, after removing very short paragraphs, this resulted in a total of 209,582 paragraphs. The purpose of this corpus is to check to what extent the spirit of digital capitalism has already diffused into the mainstream of management literature and popular capitalist self-reflection, which HBR represents more than any other outlet (Schulz and Nicolai 2015).

4.2 Methodological Approach

The coding scheme is the result of a reflexive process of theory-building and empirical validation, where theoretically derived – or, in the case of the solutionist polity: qualitatively developed – polities were specified and disambiguated in multiple rounds of coding. This iterative procedure was meant to balance theoretical ambition and empirical reliability and feasibility. In practice, Table 1 served as the basis for the coding process, while a more

⁶While some digital elites publicly express themselves more frequently than others, we have at least one and no more than 5 documents for each of the 30 digital elites identified on the Forbes 400. For more details on the sampling procedure, as well as on the other corpora, see online appendix A.

comprehensive coding scheme further clarified remaining ambiguities. Our unit of analysis were paragraphs, as they are often natural units of meaning; they often make, as it were, a point, and are short enough to be relatively unambiguous and long enough to be informative. Paragraphs were assigned to a polity when they contained a clear and affirmative reference to one of the normative principles laid out in Table 1. If paragraphs were purely descriptive or did not unambiguously refer to one polity, they were assigned to a residual category. Here are two examples of paragraphs that were coded as solution and market respectively:

“We are investing in driverless technology (...), why? Well a million people a year die in cars, and how many more millions get injured, it’s just needless right, and how much time, how much worse is our lives because we’re sitting there with a steering wheel in our hands being stressed out and frustrated with traffic remember, (...) when you can give people their time back, and when you run these cars more efficiently and there’s no more traffic, this is magic.”

“No. We are thinking in terms of purely commercial, business relations. Neither ‘friendship’ nor ‘international cooperation’ can be an excuse for not making a profit. These new ventures are very important strategically for us.”

Since our dataset contains several hundred thousand paragraphs, we used a supervised learning approach to estimate category proportions for the corpora based on a set of hand-coded paragraphs. This involves three steps (Grimmer and Stewart 2013, 275). First, we hand-coded 1518 documents from all three datasets. After extensive coder training, we achieved good reliability scores on various metrics (Krippendorff’s $\alpha = 0.7$).⁷ Moreover, most disagreements between coders were the result of one coder opting for the residual category. This suggests that the polities themselves are quite distinct but that coders sometimes have difficulties assessing whether or not a statement is unambiguous or clear enough to qualify

⁷For more details, see online appendix B

for a certain polity. If we remove documents with such disagreements, the reliability scores become very good (Krippendorff’s $\alpha = 0.87$).

Second, based on the labeled training set we infer category proportions in the unlabeled test set using an method of automated nonparametric content analysis called *readme* (Hopkins and King 2010; Jerzak, King, and Strezhnev, n.d.). Most supervised learning techniques are optimized to classify individual documents and follow a parametric ‘classify and count’ logic; *readme*, by contrast, ‘directly’ estimates the proportion of documents in each category, which has been shown to produce less model dependent and biased results (classifiers can produce biased estimates of proportions even if they correctly classify a high number of documents) (Hopkins and King 2010, 234). *readme* makes the crucial assumption “that the labelled conditional feature matrix is an unbiased estimator of the unlabeled conditional feature matrix” (Jerzak, King, and Strezhnev, n.d., 6), that is, that the hand-labeled documents contain word profiles – or examples of language use – sufficiently similar to those in the test set (Hopkins and King 2010, 237). Given that the hand-labelled documents are a random subset of the unlabeled documents and thus cover a similar (and relatively short) time period, we are confident to meet this assumption.

The third step is to validate the model output, and based on the results, to estimate the category proportions for (time-slices of) the various corpora. Since we are not classifying individual documents, traditional validation metrics like accuracy or recall are not available. To validate our results, we thus produced 20 random 50/50 splits of the 1203 correctly coded paragraphs and run *readme* on each of these training set/test set splits. Since we knew the ‘true’ proportion of each category in the test sets, we can compare them to the category proportions estimated by *readme*. For our analysis, we use the R package *readme2* , which improves on the original *ReadMe* package in two ways: first, it uses pre-trained dictionaries of word vectors to improve the choice of optimal features from a large space of potential document summaries in a way that maximizes textual discrimination between categories; and it uses matching techniques to remove documents from the labeled set that are so different

from those in the unlabeled set that they are unlikely to result from the same data-generating process (which may happen due to semantic change) (Jerzak et al., 2019).

Figure 1 shows that `readme2` produces roughly accurate predictions for the various categories. While the residual category is considerably underestimated, especially if we remove unmatched word stems, this seems acceptable since `readme` ‘spreads’ the unused percentages relatively evenly across the other categories. This also makes sense given that the residual category contains paragraphs that make references to multiple polities. In short, while we cannot interpret small differences, we have good estimates of the prevalence of different types of normative justification and we can trace larger shifts in their relative importance.⁸

While intercoder reliability statistics and validation metrics demonstrate that humans can reliably distinguish between different polities and that the algorithm can reliably replicate these codings, this says nothing about the substantive validity of the coding scheme itself. While we acknowledge that the typology developed by Boltanski et al. is by no means the only way to classify normative orders, it strikes us as useful, sufficiently generalizable, and well established. It is useful because it identifies theoretically sophisticated and conceptually distinct (although not exhaustive) normative principles. It is general enough to have been successfully applied over time and across different geographical contexts.⁹ And it is prominent enough to allow us to compare our results to a large body of both qualitative and quantitative work, which helps us both validate our findings and situate them in a larger literature.

⁸In the paper, we present the results of `readme` with matching. However, as appendix C shows, the results are quite similar if we do not use matching, and our substantive interpretations remain the same.

⁹This, however, does not mean that the spirit of (digital) capitalism itself does not differ not only across time but also across geography. To the contrary, processes of selective translation and appropriation may well refract the capitalist spirit into a variety of national or regional spirits that resemble but are distinct from the American version (cf. Kalbermatter, Nachtwey, and Truffer 2020).

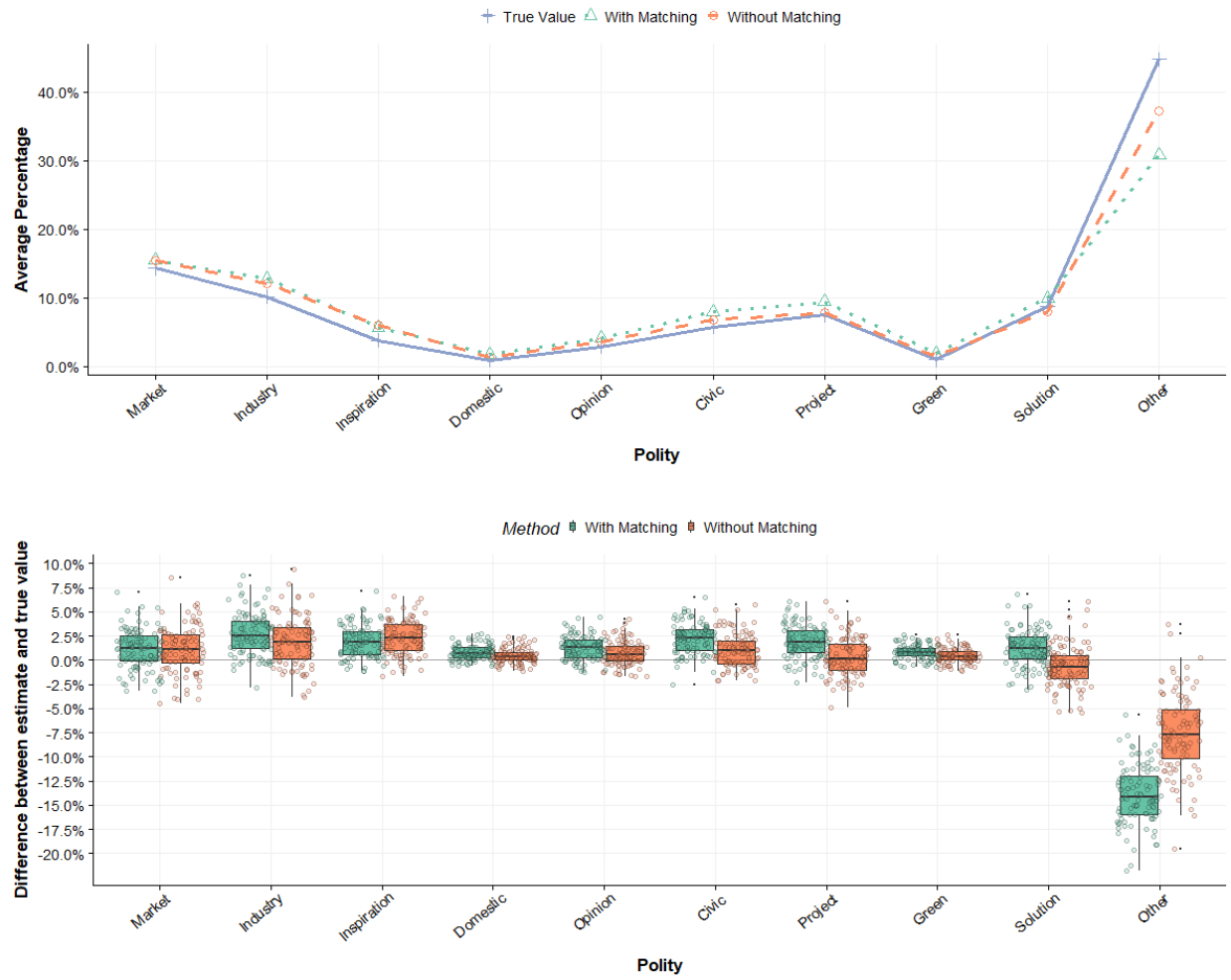


Figure 1: Estimated and true category proportions (individual dots refer to the results of different runs)

5 Results and Discussion

Which are the values digital elites refer to in their speeches and interviews? In other words, what is the normative self-image they have or want to project? We find a belief in the world-improving power of technological entrepreneurship is indeed central to the belief system of digital elites, closely followed by the faith in the blessings of the market and the value of efficiency (Figure 2). Meanwhile, the traditional authority of the domestic polity, the vain desires of the opinion polity, and ecological values of sustainability are less important. This confirms our argument that solutionist ideas are indeed central to the way digital elites talk about their values and ambitions.

It also complements and chimes with recent survey-based evidence according to which technology entrepreneurs have a distinct mix of culturally progressive, cosmopolitan, and even socially redistributive attitudes but strongly oppose government regulation across the board and are sceptical on government run services (Broockman, Ferenstein, and Malhotra 2019). Digital elites, on average, are not the detached or even callous libertarians they are often made out to be. They care about social problems and even concede that government might have a role in redistributing market outcomes. But because they believe in the invisible hand of the market as well as in the helping hand of solutionist businesses, they are fiercely opposed to government regulation of product or labor markets.

Having said this, one might argue that for all their lofty rhetoric, digital capitalists are still capitalists: so why should we care about their solutionist sermons? Are they not just cheap talk, rhetorical veneers on the stony reality of capitalist profit-seeking? We think that one should care, for three reasons that we elaborate on below. First, solutionist ideas have come to define not just how tech elites see themselves but also how they are seen by policymakers and the public. They can thus secure the legitimacy of companies, which is a matter of [both] survival [and] reputation” (Kazmi, Leca, and Naccache 2016, 753). In that sense, even if they are veneers, they can stabilize what they were meant to cover. Second, their solutionist credentials helped tech companies convince their workers that their values and those of the

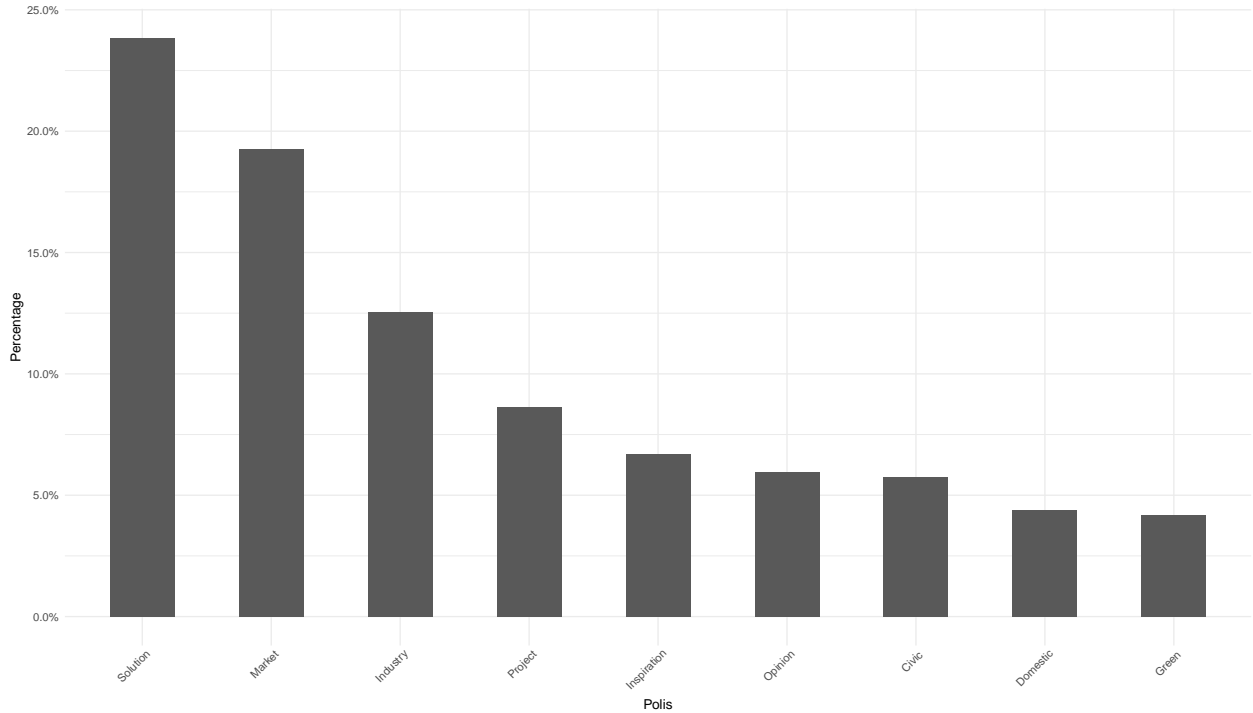


Figure 2: References to different polities in statements by digital elites.

company are aligned (cf. Kazmi, Leca, and Naccache 2016, 751–52). If tech workers believe that the authority of tech elites is legitimate – because both want to use technologies to make the world a better place – compliance costs will decline and motivation increase.¹⁰ Conversely, if these companies violate solutionist principles, worker engagement will turn into resistance. In that sense, talk is not always cheap. Third, even if what tech elites publicly profess is not what they privately feel, solutionist ideas might still guide their profit-seeking activities by pointing them towards certain problems and away from others. In that sense, even the loftiest rhetoric may be consequential. We discuss these points in turn.

¹⁰Weber himself believed that legitimate rulers, i.e. rulers that can justify their rule on rational, traditional, or charismatic grounds, can exercise their authority more effectively than if they had to rely on brute coercion. There is every reason to believe that this is also true for capitalist organizations.

5.1 Legitimation

Perhaps the most surprising thing about the recent techlash is how late it came. Given their central role in contemporary economies and societies, how could tech companies get away with so little regulatory oversight and political scrutiny for so long (Zuboff 2019, 100)? Our answer harks back to the triangular relationship between capitalism, its spirit, and its critics. We argue that solutionism – no unlike the discourse on corporate social responsibility – provided a powerful counterargument to critics of capitalism who bemoaned a loss of meaning and social purpose and decried the moral parochialism and emptiness of shareholder-value capitalism (Chiapello 2013; Kazmi, Leca, and Naccache 2016, 749). In other words, at a time when capitalism was increasingly criticized for producing private but not public wealth and for creating rather than solving social problems, solutionism lend legitimacy to those that promised to harness the power of entrepreneurship and technology for the common good.

The rise of solutionism can thus been seen as the latest installment in the capitalist cycle of growing criticism, selective appropriation of critique, and legitimacy recuperation (Chiapello 2013). Solutionism allowed capitalism to credibly refute the charge of selfishness and lack of concern for the common good while also providing a powerful rationale for limiting regulatory oversight and political scrutiny. Who, after all, is the government to stop tech companies from tackling many of the problems the government itself is not even able to solve anymore? Even Bill de Blasio, certainly no friend of big-tech, acknowledged that Silicon Valley’s “technology-religion pushed away the notions that [tech companies] should be regulated, very effectively” (Blasio, n.d.).

The spirit of digital capitalism thus stole capitalism’s critics’ thunder while also providing powerful justifications for business models that rely on the assumption that “lawlessness is the necessary context for ‘technological innovation’ ” (Zuboff 2019, 104). Larry Page, for example, has argued that “[o]ld institutions like the law and so aren’t keeping up with the rate of change that we’ve caused through technology” and only hamper Google’s ability to “build really great things” (Zuboff 2019, 105). And it was as late as 2013 that Eric Schmidt

and Jared Cohen wrote that the digital world, “the world’s largest ungoverned space”, was “not truly bound by terrestrial laws” (Schmidt and Cohen 2013, 3). By shaping the moral background of debates about technology and entrepreneurship, solutionism thus made the claims of companies like Uber – that their disdain for regulations would help solve ‘grand societal challenges’ – much more plausible (cf. Abend 2014; Zuboff 2019, 101–27).

5.2 Motivation

Solutionist ideas not only justified digital business models vis a vis policymakers and the public, but also internally vis a vis employees. While many have mocked Google’s famous former motto ‘Don’t be evil’, fewer have appreciated its significance (Foroohar 2019). For it not only provided means to align the company’s values with those of its workers and thus ensure the latter’s engagement and loyalty, it also significantly limited Google’s operational leeway. As is evident from the accounts of many others as well as our own interviews with tech workers in both California and Europe, ‘Don’t be evil’ is thus more than a branding ploy. Many Googlers really belief – or at least believed – in the company’s mission (Foroohar 2019). But these beliefs put limitations on what Google can and cannot do. A recent inside-story, for example, recounts that to “a remarkable extent, Google’s workers really do take ‘Don’t Be Evil’ to heart. C-suite meetings have been known to grind to a halt if someone asks, ‘Wait, is this evil?’” (Tiku 2019). Ignoring these limitations, which Google has repeatedly done, comes at the cost of worker disengagement and even resistance – the price Google has to pay for the motivational power of its solutionist rhetoric. This is exactly what happened during the recent wave of tech worker resistance. For example, a contract between Google and the Pentagon about the use of Artificial Intelligence to improve the targeting of drone strikes has proven deeply controversial among employees and has “touched off an existential crisis” at the company (Shane and Wakabayashi 2018). Incidents like this lay bare some of the political differences tech entrepreneurs and tech workers – differences that the solutionist rhetoric had long masked (Weigel and Tarnoff 2019). As one Googler put it:

“We stood up because (...) we believe a strong ethical framework that values human life and safety is inseparable from positive technological progress (...) Before the [protests against Project Maven], a lot of Googlers had never considered the fact that their values might not be aligned with the values of leadership. (...) Ultimately, the Project Maven campaign wasn’t just about whether Google should build this one tool for the military. It was about using our power as workers to ensure that technology is built for social benefit and not just for profit.” (Tarnoff 2018).

One of the reasons for the success of tech workers – Project Maven was eventually cancelled – was that tech workers could hold the tech companies “hostage to [their] own public image” (Tiku 2019). And this public image matters if companies want to recruit the best and brightest tech workers. Tech workers care about the “mission of the company and what the companies are trying to achieve” and “employees”, as one recruiter put it, “are wising up to the fact that you can have a mission statement on your website, but when you’re looking at how the company creates new products or makes decisions, the correlation between the two is not so tightly aligned” (Bowles 2018). Across elite universities, there is “a growing sentiment that Silicon Valley’s most lucrative positions aren’t worth the ethical quandaries” (Goldberg 2020). Facebook, in particular, had an increasingly difficult time recruiting talent “as the social stigma of working for Facebook began outweighing the financial benefits” (Bowles 2018). In short, the spirit of digital capitalism can supply powerful non-economic incentives, but it comes at the price of normative and economically costly commitments that capitalists can only ignore at their peril.

5.3 Orientation

When Mark Zuckerberg was urged to sell Facebook to Yahoo! in 2006, he refused, arguing that he shared the “really deep belief that when companies are executing well on their vision they can have a much bigger effect on the world than people think, not just as a business but

as a steward of humanity” (Friend 2015). Here, the idea that Facebook could be a ‘steward of humanity’ helped Zuckerberg make a decision laden with much uncertainty; Zuckerberg would have arguably decided differently were he only in for the money. But solutionist ideas not only affect what entrepreneurs do with their companies, but also how they allocate resources within them – or how venture capitalists and financial actors allocate resources to them.

Venture capitalist John Doerr, for example, puts his money in missionaries, not mercenaries because he believes that those that not only care about success but also about significance are the best entrepreneurs (Taylor 2016). And Google spends billions tackling huge problems with radical solutions not just because this “sends a corporate signal, both internally and externally, that [it] still nurtures the idealism” on which it was founded” (Thompson 2017); but also because it believes that solving humanity’s great problems is the surest way to make Google even richer. Google’s technological imaginaries, in other words, create an imagined future that focuses the company’s present activities while instilling investors and the public with fictional expectations that boost the companies economic reputation and market value (Beckert 2016). These orientational processes can undoubtedly be a very self-serving process, as Fred Turner recounts:

“About ten years back, I spent a lot of time inside Google. What I saw there was an interesting loop. It started with, ‘Don’t be evil.’ So then the question became, ‘Okay, what’s good?’ Well, information is good. Information empowers people. So providing information is good. Okay, great. Who provides information? Oh, right: Google provides information. So you end up in this loop where what’s good for people is what’s good for Google, and vice versa” (Turner 2017).

What is easily missed here is that the belief that information is good nudged Google to focus on those products – of all possible products – that would put Google in a position to ‘organize the worlds’ information’. That was what being good meant, after all. Thus among all possible product in an entire novel market, Google focused its investments in ‘information-organizing’ products such as maps, books, or news. That they eventually proved

highly profitable is easy to say with the benefit of hindsight, but was often much less clear at the time. Google Maps, for example, was launched years before the smartphone revolution, which only really made it into the profitable product it is today. By providing actors with beliefs about what is right and wrong, the spirit of capitalism can thus mitigate economic uncertainty by pushing capitalists towards certain potentially profitable directions and away from others, guiding their hand when economic rationality does not dictate any single course of action.¹¹

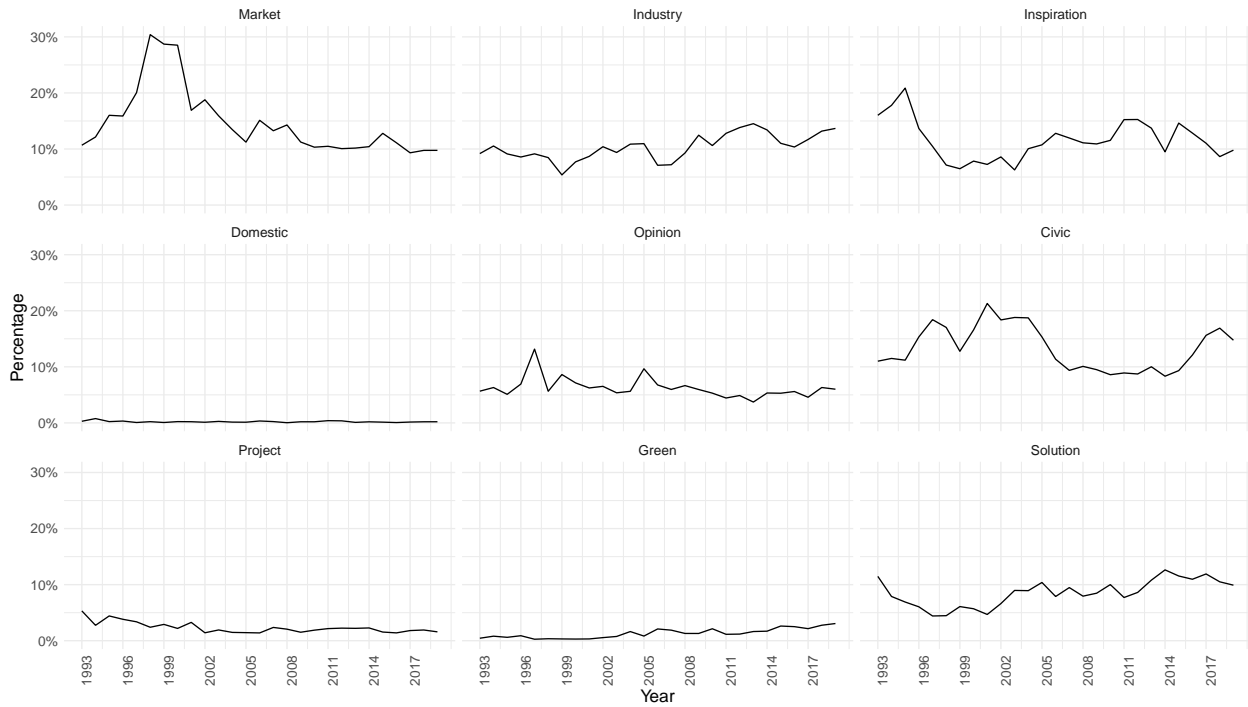


Figure 3: References to different polities in Wired paragraphs (1993-2019)

¹¹This orientational function can also help capitalist coordinate their behavior. Much like fictional expectations, they can “help economic actors work in concert in the face of uncertainty: if they share a conviction that the future will develop in a specific way and that other actors will thus behave in foreseeable ways, they may use these expectations to coordinate their decisions. [They thus] contribute to the dynamics of capitalism, since the correspondence of expectations, or ‘frame alignment’, anchors decisions for investment and innovation” (Beckert 2016, 11).

5.4 Solutionism Beyond the Tech Elites

However, even if we accept that solutionists ideas have taken hold in the hearts and minds of digital elites, and that this has consequences for the can and do conduct their business, we still don't know whether they have spread beyond this exclusive circle. How, one might ask, do they fare in the wider digital milieu. Figure 3 depicts the evolving importance of different orders of worth in Wired, widely considered “the mouthpiece of the digital revolution” (Wolf 2003, 52). While solutionist ideas are somewhat less important in the wider tech milieu than for the digital elites themselves, they do play a considerable role, especially after the dot.com-bust and the financial crisis. In line with what we would expect, the recent techlash has stopped and perhaps even slightly reversed the ascent of solutionist ideas. Meanwhile, the market, industrial, civic, and inspiration polity also figure prominently, while the values of the projective polity are surprisingly marginal. This is somewhat surprising given that the discourse on digitalization has often been associated with the ‘Post-Fordist’ values of flexibility and decentralization.

Eran Fisher, for example, argues that whereas Fordist technology discourse extolled the ability of technology to mitigate the exploitative aspects of capitalism (instability, insecurity, inequality), Post-Fordist technology discourse promised to overcome “the alienating components of capitalism” while downplaying “its exploitative components” (Fisher 2010, 235). According to Fisher, the new, post-Fordist spirit of capitalism is “inextricably linked with network technology discourse” (Fisher 2010, 243) and its promise of flat hierarchies and a more authentic but also more flexible capitalism. Gary Yeritsian has similarly argued that the new spirit of capitalism – with its emphasis on engagement, sharing, and horizontality – has diffused from the office space of the cadres into the social factory of the Web 2.0, promising digital laborers in symbolic rewards what they lack in material compensation (Yeritsian 2018).

Thus, while Fisher and Yeritsian explicate the role of new (network) technologies in amplifying the appeal and reach of Boltanski and Chiapello's new spirit of capitalism, they largely agree with its characterization: the new spirit of capitalism is a “spirit of networks”

(Fisher 2010, 243) that makes “the network a normative model” (Boltanski and Chiapello 2007, xxii) and serves as the “ethical foundation of the network enterprise” (Castells 2010, 214).¹² And indeed, in the eyes of a highly influential group of cultural entrepreneurs around Steward Brand and Kevin Kelly, digital technologies – and the internet in particular – were the symbol of a new social and economic order (Turner 2006, 202). Drawing on a long history of cybernetic and countercultural ideas, this group argued that the digital entrepreneurs of the late 20th century

“would do what the New Communalists had failed to accomplish: they would tear down hierarchies, undermine the sorts of corporations and governments that had spawned them, and, in the hierarchies’ place, create a peer-to-peer, collaborative society, interlinked by invisible currents of energy and information” (Turner 2006, 209).

By joining “the cultural legitimacy of the counterculture to the technological and economic legitimacy of the computer industry” (Turner 2006, 219), these cybercultural apostles not only legitimized a hands-off approach to internet regulation. They also articulated a broader vision of a society – often called the Californian ideology (Barbrook and Cameron 1996) – in which digital technologies would “marry the competitive demands of business with the desire for personal satisfaction and democratic participation”, achieving “productive coordination without top-down control” (Taylor 1994). The internet promised an escape from the iron cage of Fordism; it “became both a metaphor for [a post-Fordist society] and a means to bring it into being” (Turner 2006, 219).

Our results only partly corroborate these findings. While we do not find very many references to the projective polity, we do see the valuation of non-conformity, authenticity and anti-regulationism reflected in the prominent role of the inspiration and market polity – especially in the 1990s. But a central implication of our argument is that despite the close

¹²Manuel Castells (2010), p. 214 also uses the term “spirit of informationalism”.

connection between the internet and Post-Fordist values, the spirit of digital capitalism is distinct from the network-centered, post-Fordist spirit of capitalism. To be sure, the projective polity has not been abandoned, as is evident from both Figure 2 and Figure 3. Just like its predecessors, the spirit of digital capitalism is a compromise between different polities. But its defining feature is not the appeal to values of the projective polity, but to those of the solutionist polity.

Crucially, it was the changing nature of capitalism itself that undermined the justificatory power of the projective polity and ushered in solutionism. The projective polity was congenial to a type of capitalism that put networks over hierarchies, project-based collaboration over formalized division of labor, and flexibility over security. Historically, it offered a plausible defense against the artistic critics of Fordist capitalism, and an appealing justification for its neoliberal, post-Fordist successor. Its hero, the entrepreneurial self, navigates a networked world of changing projects while constantly trying to learn and innovate (Bröckling 2016). The solutionist polity, by contrast, is less a reaction to the artistic critique of the alienating aspects of capitalism than to the social critique of capitalism’s lack of solidarity and concern for the common good. It is congenial to a type of capitalism – epitomized by Wall Street – that is rampant with individualism and seemingly devoid of a social contract. The solutionist hero, the philanthro-entrepreneur, uses his business acumen and tech-savviness to optimize the world – not just himself. It is therefore unsurprising that solutionist ideas seemed to have gained prominence after the globalization protests of early 2000s and the financial crisis.¹³

At a time when the promissory legitimacy of neoliberalism – its ability to plausibly promise a better future – has exhausted itself (Beckert 2019), solutionism took up (part of) the

¹³As we can in Figure 3, solutionist ideas seem to have gained in prominence after the bursting of the dot.com bubble, which drove out the more mercenary “carpetbaggers” and left behind the more idealistic “true believers” (Tacy 2011). Moreover, the ‘PayPal Mafia’ around Peter Thiel and Elon Musk, many of them ardent solutionists, played an outsized role in funding and shaping many startups in the early 2000s, as venture capital retrenched and they filled the void (McNamee 2019, 48).

slack. The spirit of digital capitalism no longer justifies an economic order that is *primarily* plagued by rigid Fordist hierarchies, but one that is beset by post-Fordist selfishness, precarity, and lack of civic-mindedness. Digital technologies are once again heralded as a panacea for capitalism’s ills. But this time they do not promise to “flatten organizations, globalize society, decentralize control, and help harmonize people” (Nicholas Negroponte quoted in Turner 2006, 1). Rather, they claim to solve society’s problems root and branch, from traffic deaths to death itself. These differences are related to differences in the underlying technologies. While miniaturization and networking were the central technological developments during the heyday of the projective polity, today’s technological landscape is dominated by Artificial Intelligence and platform infrastructures.¹⁴ Due to the centripetal, centralizing tendencies, the later lend themselves to solutionist applications more than personal computers or the internet.

The anti-statist and technophile tendencies of the Californian counterculture have thus found a new home in the solutionist worldview. And while they find their most fierce adherents in the elites of today’s platform capitalism, they also made their way into the wider digital milieu.¹⁵ But did solutionist ideas also make headways outside of tech elites and the wider tech community? Figure 4 depicts references to the different orders of worth in the Harvard Business Review – perhaps the central venue for capitalist self-reflection. Unsurprisingly, we find that the values of the industrial and market polity play a prominent role in a magazine

¹⁴It is not coincidental that using Artificial Intelligence to solve complex problems has been guiding vision of people working in this field since the very beginning (Heaven 2020).

¹⁵Weber made clear that the spread of attitudes associated with the spirit of capitalism required “long and arduous process of education” (Weber 2007, 25), with the protestant religious communities being the main agents and loci of socialization. In the case of the spirit of digital capitalism, the annual Burning Man event might play a similar role – one in which the solutionist beliefs of tech elites and workers alike are reinforced in ritualistic practices and Durkheimian experiences of collective effervescence (cf. Beckert 2016, 79). “As once, 100 years ago, churches translated Max Weber’s protestant ethic into a lived experience for congregations of industrial workers, so today Burning Man transforms the ideals and social structures of bohemian art worlds, their very particular ways of being ›creative‹, into psychological, social and material resources for the workers of a new, supremely fluid world of post-industrial information work” (Turner 2009, 75–76).

that is centrally concerned with the efficiency of organizations and the functioning of markets. What is remarkable, however, is that project polity becomes a lot more important in the 1990s while the civic and industrial polities lose ground. This strongly confirms Boltanski and Chiapello’s argument that the values of the flexibility and agility have started to partly replace the values of the technical efficiency and planning, which had their heyday in the age of Fordism. Starting in the late 1980s, we find this shift to post-Fordist values reflected in capitalist discourse.

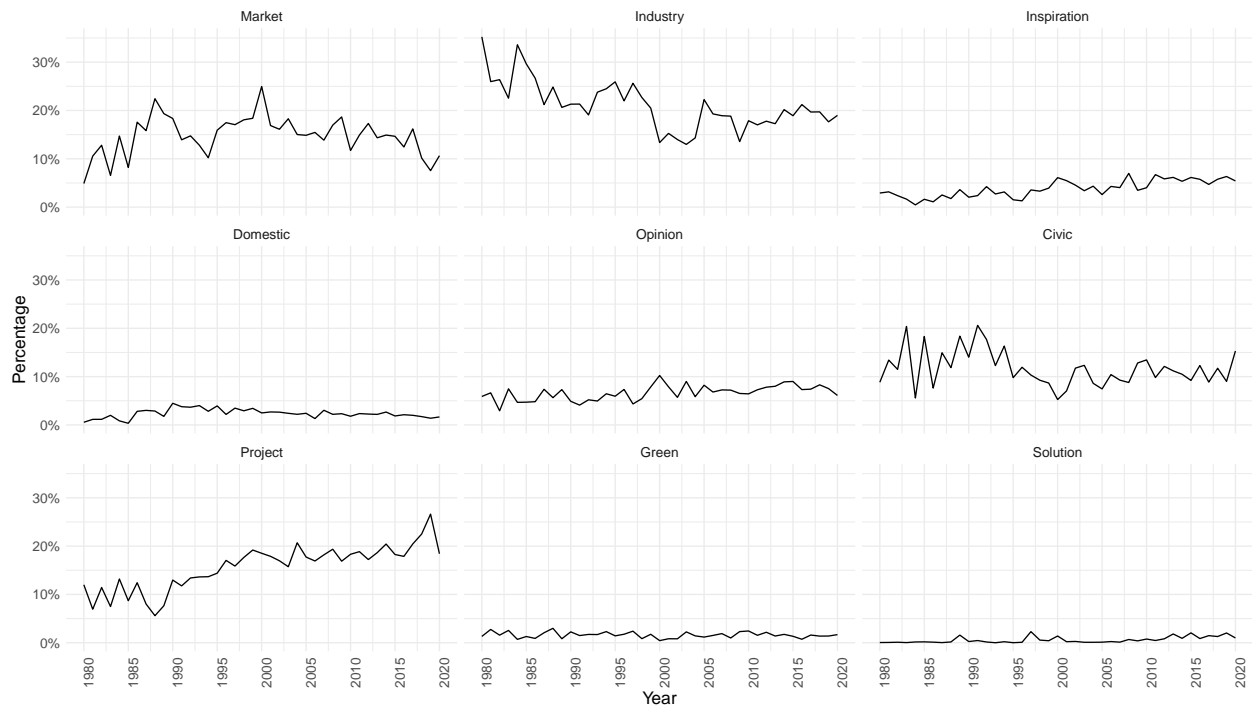


Figure 4: References to different polities in HBR articles (1980s-2020)

The solutionist polity, however, remains marginal for now. Although we cannot be certain, it might have slightly grown in recent years, at about the same time when business scholars have rekindled a debate on the purpose of business. With much force, they have argued that businesses should abandon their narrow fixation on maximizing shareholder value and instead focus on creating “shared value” (Porter and Kramer 2011) and “shareholder welfare” (Hart and Zingales 2017) by “producing profitable solutions to problems of people and planet” (Mayer 2018, 12). Even the Business Roundtable has recently moved away from the idea that

the sole purpose of business is to increase shareholder value; instead, it encouraged companies to also invest in their employees, protect the environment and deal fairly with their suppliers (Gelles and Yaffe-Bellany 2019). It remains to be seen to what extent ideas such as these serve as a bridgehead that allow solutionist values to enter the more mainstream debates on the values on which capitalist businesses should be build. For now, the new spirit of capitalism is still the dominant configuration of normative principles that justify capitalist action. But in the cultural crucible of Silicon Valley, a new spirit has been forged that already dominates the most important sector of our times, and, with the digitalization of economies and societies at large, is destined to become a central normative force legitimizing, motivating and orienting entrepreneurs and workers from all walks of capitalist life.

6 Conclusion

In this article, we have revisited and revised the concept of the capitalist spirit. Using both qualitative and quantitative evidence, we have shown how a new capitalist spirit has formed in the beating heart of contemporary capitalism: the tech sector. We have shown that an ethic of solutionism – originating from a belief that there is a profitable technological solution to every social problem – is wide-spread among tech elites and the wider tech milieu. And we have shown that this ethic has legitimized tech companies before the public and policymakers, helped them motivate their employees, and oriented their business decisions in the face of uncertainty.

We have thus contributed – conceptually, theoretically, and empirically – to the budding debate on the moral and ideational embeddedness of capitalism. In particular, we have shown how the normative orders of justification embodied in the spirit of capitalism shape the moral background against which capitalism is justified (Abend 2014); how we can ‘measure’ and trace the normative logics that underlie and undergird capitalist action (Boltanski and Chiapello 2007; Granovetter 2017) and through which different moral views of the market society

are expressed (Fourcade and Healy 2007); and how imagined futures – and the economic dynamism and promissory legitimacy they supply – are informed by and rooted in particular normative principles, such as those of solutionism (Beckert 2016, 2019).

In addition to uncovering the ‘newest’ spirit of capitalism, we have also reproduced Boltanski and Chiapello’s finding that a new spirit of capitalism – one that centers around post-Fordist notions of flexibility and project-based activity – has emerged in the 1980s and still dominates capitalist discourse. However, given dominance of solutionist ideas in the tech sector, and given the economic and cultural dominance of the tech sector itself, it is likely that the solutionist ethic will gradually develop the “moral and normative force” (Sennett 2006, 10) to justify capitalism at large. As what some call the fourth industrial revolution unfolds, this fourth, solutionist spirit of capitalism might well come to shape how all companies justify their business models, attract and appeal to their employees, and decide on a course of action when no single one is obvious.

While solutionism provided a powerful normative defense of capitalism at a time when capitalists were increasingly criticized for producing, rather than solving social problems, its proponents have recently themselves come under criticism for producing all sorts of social problems, from creating addiction to spreading misinformation. It would be unwise, however, to write solutionism off, for two reasons. First, tech companies have developed a kind of second-order solutionism where they promise technological solutions to problems that their own technologies have created. Co-opting the criticism that they have hijacked people’s minds with their addictive and distracting technologies, tech companies have developed technological fixes to these primary technological and business defects, such as apps that help users understand their habits and nudge them towards more healthy ones. In the case of Facebook’s Time Well Spent Initiative, they even co-opted the slogan as their most prominent critics at the Center for Humane Technology. This proactive and soft appropriation of “tech-humanist” ideas “may provide Silicon Valley with a way to protect that power from a growing

public backlash – and even deepen it by uncovering new opportunities for profit-making” (Tarnoff 2018).

Second, tech companies have aggressively used solutionist rhetoric to legitimize their move into new sectors like education or health care. Even before the COVID-19 pandemic, Google and Apple have promised to use their technological prowess to ‘transform health care’, ‘improve outcomes’ and ‘save lives’. As the corona crisis has painfully exposed the dependence of modern societies on the services provided by tech companies, these companies have accelerated this move into semi-public sectors. They portray themselves and increasingly are, alongside governments, “the very sustainers of our welfare” (Magalhaes and Couldry 2020). The corona crisis has thus re- and supercharged tech companies’ solutionist credentials, which in turn have smoothed their transition to being co-providers of public welfare. The danger behind all that, and another reason why understanding the solutionist ethics of contemporary tech elites matters, is that recent events might “entrench the solutionist toolkit as the default option for addressing all our existential problems – from inequality to climate change” (Morozov 2020).

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Appendices

A Data Collection & Sampling

In the following subsections, we provide more detail on the three corpora used in the paper.

A.1 Elite Corpus

Compiling the elites corpus – a corpus of interviews, speeches, self-descriptions by the most recent generation of digital elites – involved three steps. First, we used to 2015 Forbes 400 list to identify the most successful (i.e., richest) tech elites, selecting those that made their money with digital technologies, be it as entrepreneurs (e.g. Larry Page, Elon Musk), high level executives (e.g. Eric Schmidt, Sundar Pichai) or as some mixture of entrepreneur and venture capitalists (e.g. Peter Thiel, Reid Hoffmann). Second, we selected those on that list that started what made them rich in the second half of the 1990s or later, the argument being that this newest generation of mainly web-based entrepreneurs should be quite different – both age-wise and with regard to the kinds of companies they built – from an earlier generation of mainly PC-based entrepreneurs like Steve Jobs or Bill Gates (O'Reilly 2017). Finally, we manually searched for recent documents in which these individuals describe their motivation or make programmatic statements from which their broader beliefs – as opposed to their technical knowledge, etc. – are evident. This sampling procedure resulted in 90 documents – all dating from between 2009 and 2018 – which were then split into 2326 paragraphs. Table 2 depicts the individuals that make up the digital elites corpus as well as how many documents from each individual were included.

Table 2: List of digital elites (based on Forbes 400) with number of documents

Name	Number of Documents
Bob Parsons	3
Brian Acton	2
Brian Chesky	6
Dustin Moskovitz	3
Elon Musk	8
Eric Schmidt	4
Evan Spiegel	3
Evan Williams	3
Gabe Newell	3
Jack Dorsey	3
Jan Koum	5
Jeffrey Skoll	3
Jerry Yang	1
Joe Gebbia	2
Larry Page	5
Marc Benioff	4
Mark Zuckerberg	4
Michael Rubin	1
Nathan Blecharczyk	1
Nick Woodman	1
Peter Thiel	5
Pierre Omidyar	3
Reid Hoffman	4
Robert Pera	2

Sean Parker	2
Sergey Brin	3
Sundar Pichai	3
Travis Kalanick	3
Overall	90

A.2 Wired Corpus

We scraped the Wired corpus from the web and – after manually inspecting the data – we are reasonably confident to have acquired if not all than most articles published in Wired between the magazine’s founding in 1993 and 2019. We again split all articles into paragraphs – our unit of analysis. We then removed very short paragraphs with less than 200 characters as they often contain no useful information. As a result, we ended up with 1.514.839 paragraphs.

A.3 Harvard Business Review Corpus

We also scraped the Harvard Business Review corpus from online library provider EBSCOhost. We first generated the article-links and then downloaded all the available html-files as text from the provider. As the texts were already divided into paragraphs in the HTML-source, we it was fairly easy to extract the articles. However, we realized that the articles we obtained via our library’s access provider were incomplete as not all articles are available as HTML; most of the older articles were only available as PDF-Files. Thus, we were so far unable to retrieve all documents as text, as we’d need to find a reliable way to extract the paragraphs from the available PDF documents, which – on top of other OCR-related difficulties – are irregularly divided into two to sometimes even four columns. Figure 5 depicts the HBR articles that are available as HTML files (red) versus all available articles (black) on EBSCO Host. To avoid

bias, we restricted our analysis – for the moment – to all years after 1980, where we were able to acquire not all but most articles. This procedure resulted in 209.582 paragraphs.

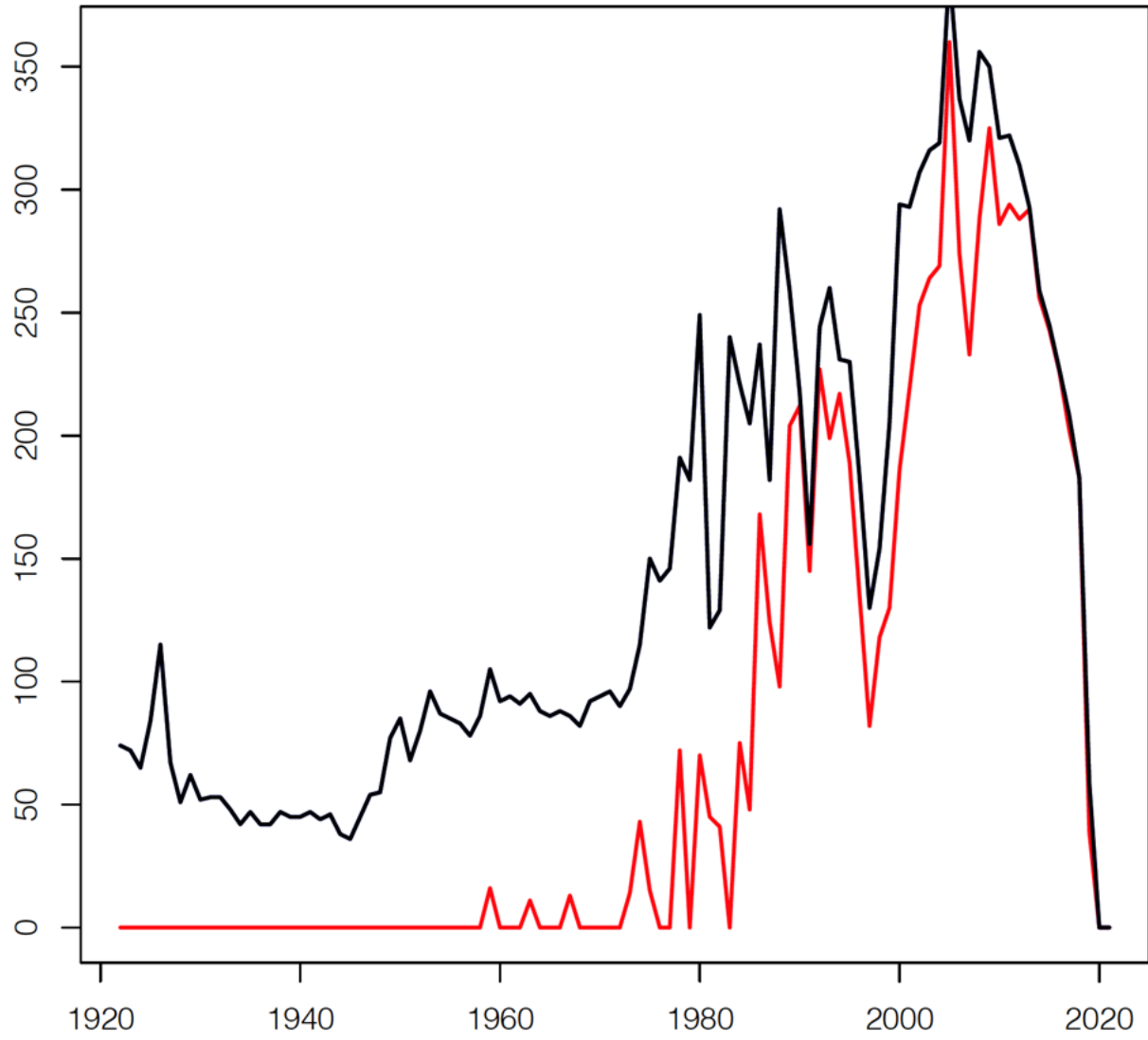


Figure 5: PDF (red) versus all (black) HBR articles

B Inter-coder Reliability

After training the coders and refining the coding scheme, we randomly sampled 1518 paragraphs with roughly equal numbers from the three corpora: 398 for the elite corpus, 591 from the Wired Corpus, 529 from the Harvard Business Review Corpus. Table 3 reports various measures of inter-coder reliability, plus bootstrapped confidence intervals when available. Table 5 depicts a confusion matrix showing that many disagreements resulted from one coder choosing “Other” while the other code chose one of the polities. As reported in the paper, if we remove these disagreements, reliability scores further improve, as reported in Table 6.

Table 3: Inter-coder Reliability Metrics

Measure	Value	95% Confidence Interval
Krippendorff’s Alpha	0.697	0.68–0.71
Cohen’s Kappa	0.697	0.67–0.73
Gwet’s AC1	0.747	0.72– 0.77
Holsti’s Method (Percentage Agreement)	0.769	-

Table 4: Agreement Matrix

	Market	Industry	Inspiration	Domestic	Opinion	Civic	Project	Green	Solutionist	Other
Market	167	13	2	1	4	0	10	0	9	27
Industry	1	115	1	0	0	1	7	0	3	23
Inspiration	1	2	44	0	2	0	3	0	2	9
Domestic	0	0	1	9	0	0	3	0	0	1
Opinion	0	0	0	0	34	1	0	0	0	0
Civic	1	7	0	2	1	63	3	0	1	24
Project	2	4	4	2	0	1	83	0	5	17
Green	0	0	0	0	0	0	0	12	0	0
Solutionist	12	9	1	1	1	3	5	0	99	5
Other	30	26	13	0	8	11	18	0	7	541

Table 6: Intercode Reliability Metrics after removing x-other disagreements

Measure	Value	95% Confidence Interval
Krippendorff's Alpha	0.868	0.86–0.87
Cohen's Kappa	0.868	0.85–0.89
Gwet's AC1	0.889	0.87– 0.91
Holsti's Method (Percentage Agreement)	0.898	-

C Results with and without matching

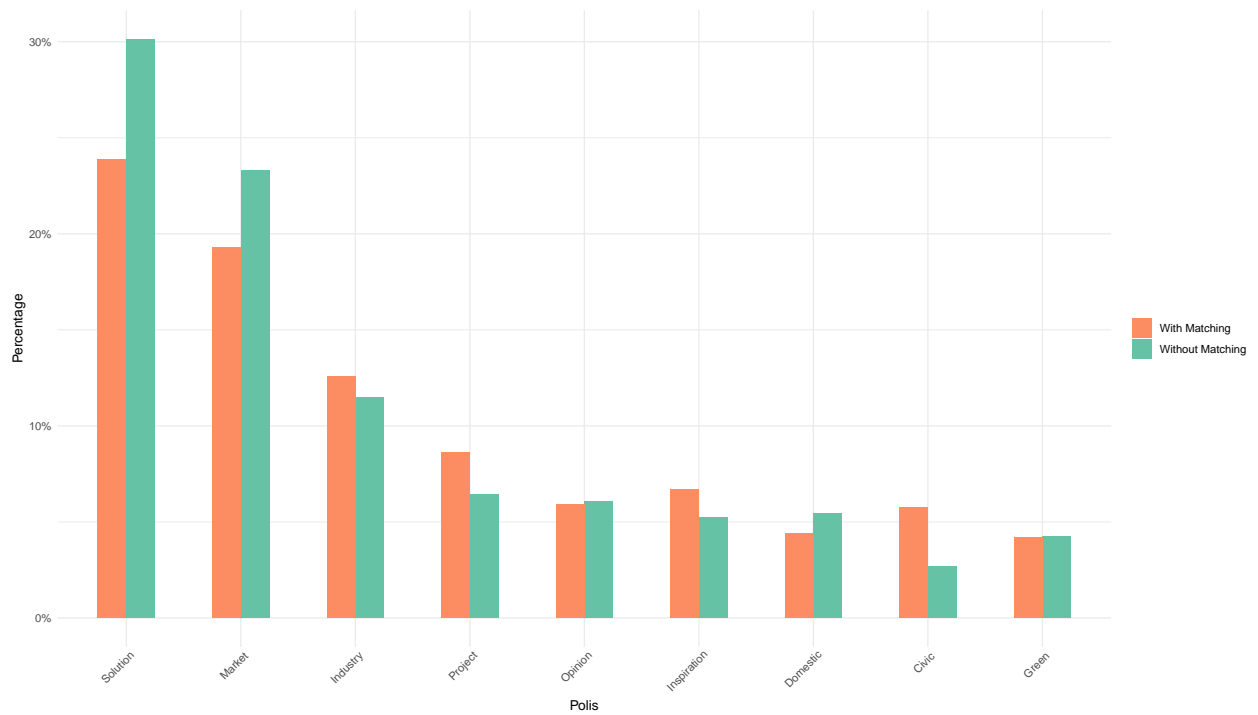


Figure 6: Elites with and without matching

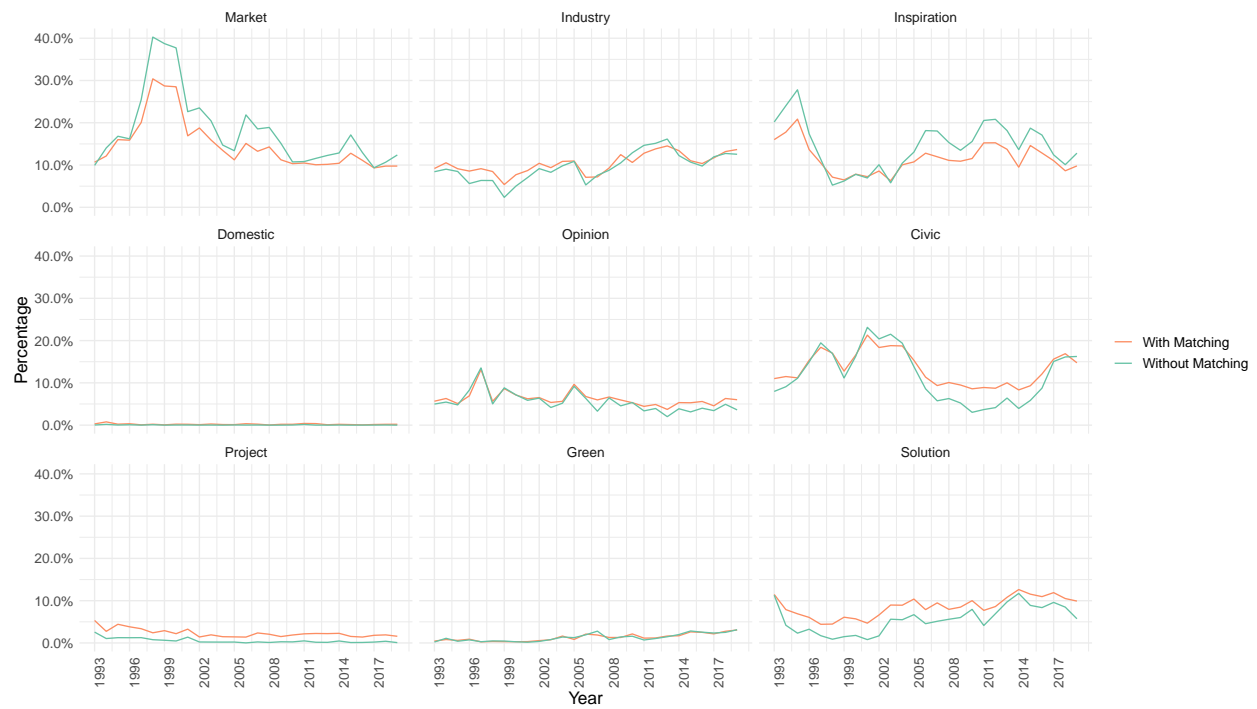


Figure 7: Wired with and without matching

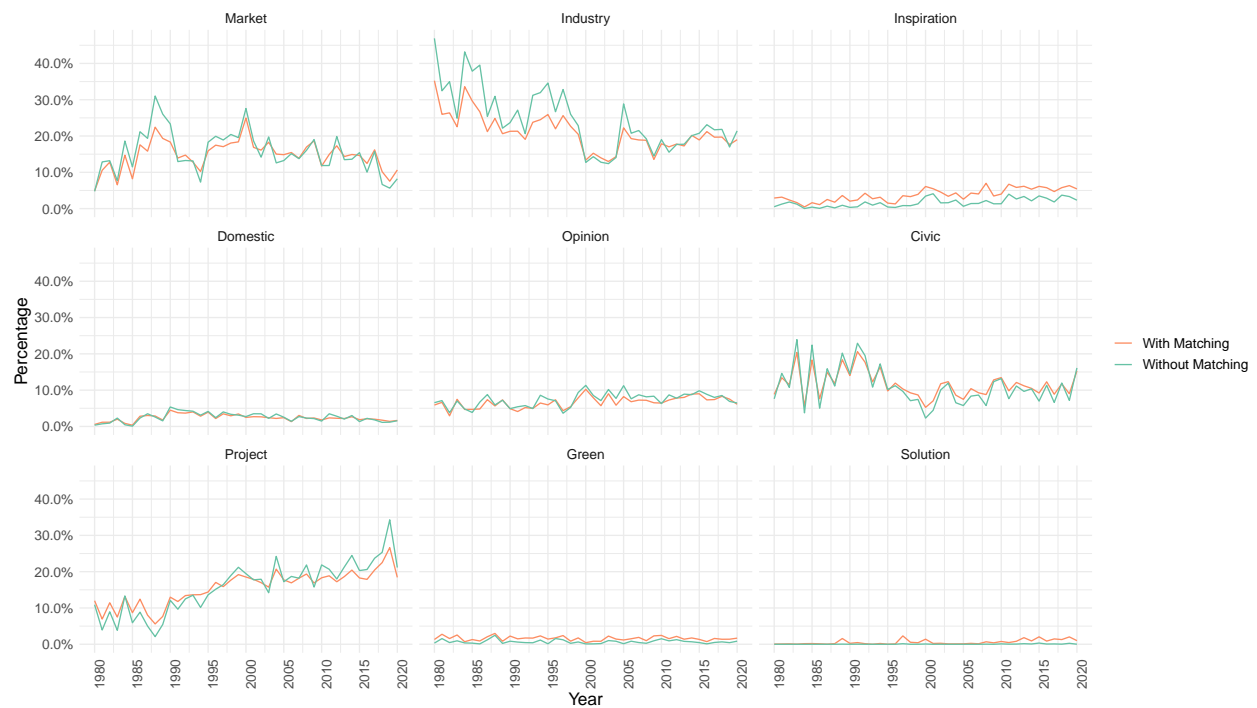


Figure 8: Harvard Business Review with and without matching

D References

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